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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,760

02/05/2008

Gottfried Knispel

100727-115 WCG

4169

27386

7590

04/25/2011

GERSTENZANG, WILLIAM C.

NORRIS MCLAUGHLIN & MARCUS, PA

875 THIRD AVE, 8TH FLOOR

NEW YORK, NY 10022

EXAMINER

JANCA, ANDREW JOSEPH

ART UNIT

PAPER NUMBER

1774

MAIL DATE

DELIVERY MODE

04/25/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,760	Applicant(s) KNISPEL ET AL.	
	Examiner Andrew Janca	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) 2,24-26 and 28-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I, claims 1 and 3-23 in the reply filed on 3/31/11 is acknowledged. The traversal is on the ground(s) that 1) it would not be a serious burden to search and examine all groups together, and 2) that division among four separate patent applications and possibly patents would impose an unnecessary financial burden on Applicants and an unnecessary duplication of information between four overlapping specifications which would impose a burden on the public. This is not found persuasive because 1) although a complete search for any one of four related but distinct inventions (a mixer, a special shaft which may be used in other mixers, a special closing plate which may be used in other mixers, and a method for mixing dental materials) would likely identify prior art reading on features of the other three inventions, it would be substantially less than a properly complete search of all four or any two or three of the inventions combined. Different though possibly (though as the instant specification describes them as different possible features, not necessarily) combinable mixers and parts which may be disclosed in the prior art for applications unrelated to dental materials, and methods of mixing dental materials in particular, require substantially different search strategies and areas of search. 2) Although Applicants are correct in arguing that it would be more convenient for the public to find the descriptions of the members of a family of related inventions in a single disclosure rather than several, and that it would be more economical for Applicants to pursue a single patent

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for the family of inventions as a whole, PCT Rule 13 permits prosecution of a family of related inventions when their technical relationship includes at least one common special technical feature showing that they form a single inventive concept. If all technical features common to a pair of claimed inventions identified as distinct by the examiner are already known in the prior art, they do not share a special technical feature and hence do not together share a single inventive concept--that is, although they individually taken may or may not be inventions contributing a new or improved feature to their field of endeavor, the features they share in common are not. Hence the distinct claimed inventions identified by the restriction requirement do not possess the unity of invention necessary to be considered for a single patent.

The requirement is still deemed proper and is therefore made final. Claims 2, 24-26, and 28-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 4, 6-13, and 22-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 1 recites “the mixing chamber”, “the larger opening of the supply container or the mixer”, “the mixer shaft”, “the chamber wall(s)”, “the mixing blade”. There is insufficient antecedent basis for these limitations in the claim.

7. Claims 4, 6, and 8-11 recite “the inlet opening”. Two inlet openings having been antecedently recited, it is unclear to which mixing opening this limitation should apply.

8. Claim 10 recites “the buffer chamber” and “the buffer reservoir”. There is insufficient antecedent basis for these limitations in the claim.

9. Claims 22 and 23 recite “the mixing elements”. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 3-11, 14-15, and 19-21 are rejected under 35 USC 102(b) as anticipated by CA 2435913 to Pauser et al.

12. With regard to claim 1, Pauser disclose a system which may be used for producing dental impression materials, in which the dental materials of various consistencies are extruded from supply containers through outlet openings in the supply containers into a mixer while being kept isolated from one another, the inlet openings of the mixer being matched to the outlet openings of the supply containers, characterized in that the system comprises at least two of the following elements: a) a buffer reservoir [10], expanded with respect to an inlet opening, one of (2, 3), which is not separate from the mixing chamber; b) a strand divider, one of (14, 15) situated in the buffer reservoir [10]; c) an element at the smaller opening [3] of the mixer or the supply container which prevents the larger opening [2] of the supply container or the mixer from being placed thereon; d) a minimum distance of 4 mm between the mixer shaft and the chamber wall; e) a mixer shaft whose cross-sectional area is a maximum 20% of the cross-sectional area between the chamber walls; f) a mixer shaft together with mixing elements which have a combined cross-sectional area that is less than 60% of the cross-sectional area between the chamber walls; g) a mixer shaft having an expansion which narrows the flow cross section; h) a mixer shaft whose mixer axis located between the mixing blade planes has a wall running eccentrically in the radial direction; i) a closing part [1] having a flow perturbation element [16] (16 perturbs the inflow from 2) running in the flow direction, opposite the direction of rotation; j) the mixing blade closest to the closing part

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is designed such that the mixing blade can extend over only a portion of the surface formed by the closing part [1] (figures 1-4; 9:1-10:37, 13:19-15:10).

13. With regard to claim 3, Pauser disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [9] having a discharge opening [4] at the front end of the chamber section and having a closing part [1] situated at the rear end of the chamber section having a base plate, with inlet openings [2, 3] for individual components to be introduced, and a central opening for a mixer shaft [6] which is rotatable about its longitudinal axis in the chamber section [9], characterized in that the inlet opening [2] for the component ("multi-component") present in the greater quantity expands outside the region [9] of the chamber which is accessible to the mixing elements to a buffer reservoir [10] which is not separated from the mixing chamber [9] (figures 1-4; 9:1-10:37, 13:19-15:10).

14. With regard to claim 4, Pauser disclose a dynamic mixer according to claim 3, characterized in that the buffer reservoir [10] may extend around the inlet opening [2] (9:26-29).

15. With regard to claim 5, Pauser disclose a dynamic mixer according to claim 3, characterized in that at least one end [at 2] of the buffer reservoir [10] adjoining the closing part [1] has a rounded or beveled shape, at least in part (figure 4).

16. With regard to claim 6, Pauser disclose a dynamic mixer according to claim 3, characterized in that at least a portion of the inlet opening, one of (2, 3) is covered at a distance by a stationary deflection element, one of (14, 15).

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17. With regard to claim 7, Pauser disclose a dynamic mixer according to claim 6, characterized in that the area of the deflecting element, the 50% of [15] facing [2], facing the mixing chamber is smaller than the sum of the areas of the outlet openings for the buffer chamber [10] in the mixing chamber [9] (10:6-20, 10:34-37; figure 4).

18. With regard to claim 8, Pauser disclose a dynamic mixer according to claim 6, characterized in that the deflecting element, the 50% of [15] facing [2], has a separating edge on its side facing the inlet opening [2] for dividing the product flow (10:6-20, 10:34-37; figure 4).

19. With regard to claim 9, Pauser disclose a dynamic mixer according to claim 3, characterized in that the sum of the flow cross-sectional areas of the buffer chamber [10] is greater than that for the inlet opening, one of (2, 3): as a three-dimensional passage such as buffer chamber 10 has an infinite number of two-dimensional flow cross-sectional areas, their sum exceeds the cross-sectional area of either of (2, 3) (figures 1-4).

20. With regard to claim 10, Pauser disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [9] having a discharge opening [4] at the front end of the chamber section and having a closing part [1] situated at the rear end of the chamber section having a base plate, with inlet openings, two or more of the openings of 6:7-12, for individual components to be introduced, and a central opening for a mixer shaft [6] which is rotatable about its longitudinal axis in the chamber section [9], characterized in that a portion of the buffer chamber [10] is situated between an inlet opening [2] and the mixing chamber [9],

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outside the direct flow path, and the buffer reservoir [10] is not separated from the mixing chamber [9] by a boundary wall (figures 1-4; 6:7-12, 9:1-10:37, 13:19-15:10).

21. With regard to claim 11, Pauser disclose a dynamic mixer according to claim 10, characterized in that the buffer chamber [10] has at least one ventilation opening, another one of the openings of 6:7-12, situated away from the mixing chamber [9], the cross-sectional area of the ventilation opening being much smaller than that of an inlet opening [2]: at least one of the openings such as [3] may be much smaller than an inlet opening [2], which opening may be used as a ventilation opening if desired. Regarding the intended use of the opening, it has been held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987).

22. With regard to claim 14, Pauser disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [9] having a discharge opening at the front end of the chamber section and having a closing part [1] situated at the rear end of the chamber section having a base plate, with inlet openings [2, 3] for individual components to be introduced, and a central opening for a mixer shaft [6] which is rotatable about its longitudinal axis in the chamber section [9], characterized in that both components enter the mixing chamber [9] at [12] and [13] (figures 2, 4) over the available radial width of the closing part [1]: the radial width of closing part 1 which is available to the components to enter is necessarily the radial width of the openings in 16 from the buffer chamber to the mixing chamber, since no

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other passage is available for the components to enter the mixing chamber (figures 1-4).

23. With regard to claim 15, Pauser disclose a dynamic mixer according to claim 14, characterized in that at least one inlet opening [2] is designed for a channel [2-10-12] that is open toward the mixing chamber side.

24. With regard to claim 19, Pauser disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [9] having a discharge opening [4] at the front end of the chamber section and having a closing part [1] situated at the rear end of the chamber section having a base plate, with inlet openings [2, 3] for individual components to be introduced, and a central opening for a mixer shaft [6] which is rotatable about its longitudinal axis in the chamber section [9], characterized in that the inlet opening [2] for the component ("multi-component") present in the greater quantity expands up to the region [9] of the chamber which is accessible to the mixing elements to a buffer reservoir [10], and a strand divider 15 is situated in the buffer reservoir [10] (figures 1-4; 14:1-9).

25. With regard to claim 20, Pauser disclose a dynamic mixer comprising a chamber section [9] closed by a closing part [1], and a mixer shaft [6] which is rotatable about its longitudinal axis in the chamber section [9], characterized in that the mixing blade [7] closest to the closing part [1] extends over only a portion of the surface formed by the closing part [1] (figure 3), and the base plate of the closing part [1] contains at least one flow perturbation element [16] running in the flow direction, opposite the direction of rotation: element [16] perturbs the inflow from [2] (figure 4).

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26. With regard to claim 21, Pauser disclose a dynamic mixer according to one of claims 1 through 20, characterized in that the dynamic mixer has mixing elements [7] having an impact surface in the direction of rotation, parallel to the mixer axis, and being narrower to the rear, at least in part. As the mixer is coupled to a rotational drive of the user's selection by coupling [8] (figure 4), the mixing elements may be rotated in either direction (figures 1-4).

27. Claims 1, 3-6, 9-10, 14-15, 17-20, and 22-23 are rejected under 35 USC 102(b) as anticipated by US 6,523,992 B1 to Bublewitz et al.

28. With regard to claim 1, Bublewitz disclose a system which may be used for producing dental impression materials, in which the dental materials of various consistencies are extruded from supply containers through outlet openings in the supply containers into a mixer while being kept isolated from one another, the inlet openings of the mixer being matched to the outlet openings of the supply containers, characterized in that the system comprises at least two of the following elements: a) a buffer reservoir [64], expanded with respect to an inlet opening [54] which is not separate from the mixing chamber; b) a strand divider, the deflecting partial wall of [64], situated in the buffer reservoir [64]; c) an element [30] at the smaller opening [56] of the mixer or the supply container which prevents the larger opening of the supply container [28] or the mixer [54] from being placed thereon; d) a minimum distance of 4 mm between the mixer shaft and the chamber wall; e) a mixer shaft [72] whose cross-sectional area is a maximum 20% of the cross-sectional area between the chamber walls; f) a mixer shaft [72] together with mixing elements [77] which have a combined cross-sectional area

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that is less than 60% of the cross-sectional area between the chamber walls; g) a mixer shaft [72] having an expansion [86] which narrows the flow cross section; h) a mixer shaft whose mixer axis located between the mixing blade planes has a wall running eccentrically in the radial direction; i) a closing part [62] having a flow perturbation element [71]; j) the mixing blade [74] closest to the closing part is designed such that the mixing blade can extend over only a portion of the surface formed by the closing part [62] (figures 2-7; 7:19-10:17).

29. With regard to claim 3, Bublewitz disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [44] having a discharge opening [52] at the front end of the chamber section and having a closing part [62] situated at the rear end of the chamber section having a base plate, with inlet openings [54, 56] for individual components to be introduced, and a central opening for a mixer shaft [72] which is rotatable about its longitudinal axis in the chamber section [44], characterized in that the inlet opening [54] for the component ("multi-component") present in the greater quantity expands outside the region [44] of the chamber which is accessible to the mixing elements to a buffer reservoir [64] which is not separated from the mixing chamber [44] (figures 2-7; 7:19-10:17).

30. With regard to claim 4, Bublewitz disclose a dynamic mixer according to claim 3, characterized in that the buffer reservoir [64] may extend around the inlet opening [54] (figure 3; 7:56-8:26).

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31. With regard to claim 5, Bublewitz disclose a dynamic mixer according to claim 3, characterized in that at least one end [at 64] of the buffer reservoir [64] adjoining the closing part [62] has a rounded or beveled shape, at least in part (figures 3-4).

32. With regard to claim 6, Bublewitz disclose a dynamic mixer according to claim 3, characterized in that at least a portion of the inlet opening [54] is covered at a distance by a stationary deflection element [71] (7:56-8:26; figures 2-3).

33. With regard to claim 9, Bublewitz disclose a dynamic mixer according to claim 3, characterized in that the sum of the flow cross-sectional areas of the buffer chamber [64] is greater than that for the inlet opening, one of [54, 56]: as a three-dimensional passage such as buffer chamber 64 has an infinite number of two-dimensional flow cross-sectional areas, their sum exceeds the cross-sectional area of either of [54, 56] (figures 2-3).

34. With regard to claim 10, Bublewitz disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [44] having a discharge opening [52] at the front end of the chamber section and having a closing part [62] situated at the rear end of the chamber section having a base plate, with inlet openings [54, 56] for individual components to be introduced, and a central opening for a mixer shaft [72] which is rotatable about its longitudinal axis in the chamber section [44], characterized in that a portion of the buffer chamber [64] is situated between an inlet opening [54] and the mixing chamber [44], outside the direct flow path, and the buffer reservoir [64] is not separated from the mixing chamber [44] by a boundary wall (figures 2-7; 7:19-10:17).

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35. With regard to claim 14, Bublewitz disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [44] having a discharge opening at the front end of the chamber section and having a closing part [62] situated at the rear end of the chamber section having a base plate, with inlet openings [54, 56] for individual components to be introduced, and a central opening for a mixer shaft [72] which is rotatable about its longitudinal axis in the chamber section [44], characterized in that both components enter the mixing chamber [44] at [68] and [70] over the available radial width of the closing part [62]: the radial width of closing part 1 which is available to the components to enter is necessarily the radial width of the openings in 16 from the buffer chamber to the mixing chamber, since no other passage is available for the components to enter the mixing chamber (figures 2-7; 7:19-10:17).

36. With regard to claim 15, Bublewitz disclose a dynamic mixer according to claim 14, characterized in that at least one inlet opening [56] is designed for a channel [66] that is open toward the mixing chamber side (figure 2).

37. With regard to claim 17, Bublewitz disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [44] having a discharge opening at the front end of the chamber section and having a closing part [62] situated at the rear end of the chamber section having a base plate, with inlet openings [54, 56] for individual components to be introduced, and a central opening for a mixer shaft [72] which is rotatable about its longitudinal axis in the

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chamber section, characterized in that the cross-sectional area of the mixer shaft [72] is less than 20% of the cross-sectional area of the chamber section [44] (figures 2, 4).

38. With regard to claim 18, Bublewitz disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [44] having a discharge opening at the front end of the chamber section and having a closing part [62] situated at the rear end of the chamber section having a base plate, with inlet openings [54, 56] for individual components to be introduced, and a central opening for a mixer shaft [72] which is rotatable about its longitudinal axis in the chamber section, characterized in that the cross-sectional area of the mixer shaft [72], including the mixing elements [pins 77], is less than 60% of the cross-sectional area of the chamber section [44] (figures 2, 6).

39. With regard to claim 19, Bublewitz disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [44] having a discharge opening [52] at the front end of the chamber section and having a closing part [62] situated at the rear end of the chamber section having a base plate, with inlet openings [54, 56] for individual components to be introduced, and a central opening for a mixer shaft [72] which is rotatable about its longitudinal axis in the chamber section [44], characterized in that the inlet opening [54] for the component ("multi-component") present in the greater quantity expands up to the region [44] of the chamber which is accessible to the mixing elements to a buffer reservoir [64], and a strand divider [71] is situated in the buffer reservoir [64] (figures 2-7; 7:19-10:17).

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40. With regard to claim 20, Bublewitz disclose a dynamic mixer comprising a chamber section [44] closed by a closing part [62], and a mixer shaft [72] which is rotatable about its longitudinal axis in the chamber section [44], characterized in that the mixing blade [7] closest to the closing part [62] extends over only a portion of the surface formed by the closing part [62] (figure 3), and the base plate of the closing part [62] contains at least one flow perturbation element [71] running in the flow direction, opposite the direction of rotation: element [71] perturbs the inflow from [54] (figures 2-7; 7:19-10:17).

41. With regard to claim 22, Bublewitz disclose a dynamic mixer according to one of claims 1 through 20, characterized in that as a result of the position and shape of the mixing elements [74, 77, 78, 80, 86] attached to the mixer shaft [72], the mass to be mixed is conveyed alternately in the radial direction from the outside to the inside, and vice versa: the mixing elements cause the mass to be moved from a radial outside at inlet channels 66, 68 to the radial interior of housing 44, then to the outside (as scraper elements 77, 86 are provided to scrape mass off the chamber walls downstream of the chamber inlets, mass has been moved radially outwardly to the chamber walls, 9:52-10:1), then back to the inside to exit through radially inward positioned outlet 52 (figures 2, 6; 9:52-10:1).

42. With regard to claim 23, Bublewitz disclose a dynamic mixer according to one of claims 1 through 20, characterized in that at least two of the mixing elements [74] attached to the mixer shaft [72] in the axial direction with respect to one another are partially interconnected (9:1-5; figure 5).

Claim Rejections - 35 USC § 103

43. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

44. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

45. Claim 16 is rejected under 35 USC 103(a) as unpatentable over CA 2435913 to Pauser et al. Pauser disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [9] having a discharge opening at the front end of the chamber section and having a closing part [1] situated at the rear end of the chamber section having a base plate, with inlet openings [2, 3] for individual components to be introduced, and a central opening for a mixer shaft [6] which is rotatable about its longitudinal axis in the chamber section, having a distance between the mixer shaft [6] and the chamber section [9] (figures 1-4);

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but do not explicitly disclose that the distance between the mixer shaft [6] and the chamber section [9] is not less than 4 mm at any location. However, it has been held that limitations relating to the size of an apparatus are not sufficient to patentably distinguish over the prior art. See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

46. Claim 16 is rejected under 35 USC 103(a) as unpatentable over US 6,523,992 B1 to Bublewitz et al. Bublewitz disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [44] having a discharge opening at the front end of the chamber section and having a closing part [62] situated at the rear end of the chamber section having a base plate, with inlet openings [54, 56] for individual components to be introduced, and a central opening for a mixer shaft [72] which is rotatable about its longitudinal axis in the chamber section, having a distance between the mixer shaft [72] and the chamber section [44] (figures 2-3); but do not explicitly disclose that the distance between the mixer shaft [72] and the chamber section [44] is not less than 4 mm at any location. However, it has been held that limitations relating to the size of an apparatus are not sufficient to patentably distinguish over the prior art. See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

47. Claims 12-13 are rejected under 35 USC 103(a) as unpatentable over CA 2435913 to Pauser et al in view of US 2003/0137898 A1 by Wagner et al.

48. With regard to claim 12, Pauser disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [9]

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having a discharge opening [4] at the front end of the chamber section and having a closing part [1] situated at the rear end of the chamber section having a base plate, with inlet openings, two or more of the openings of 6:7-12, for individual components to be introduced, and a central opening for a mixer shaft [6] which is rotatable about its longitudinal axis in the chamber section [9], characterized in that a portion of a buffer chamber [10] is situated between an inlet opening [2] and the mixing chamber [9], outside the direct flow path, and the buffer reservoir [10] is not separated from the mixing chamber [9] by a boundary wall, and where the buffer chamber [10] has a third opening in the base plate at the end of the buffer chamber and the entry to the mixer, another one of the openings of 6:7-12, situated away from the mixing chamber [9], which may be used as a ventilation opening if desired, the cross-sectional area of the ventilation opening being much smaller than that of an inlet opening [2]: at least one of the openings such as [3] may be much smaller than an inlet opening [2]; but does not explicitly disclose that the ventilation opening may be axially provided in the shape of a slit at the end of the buffer chamber. However, Wagner disclose a dynamic mixer which may be used for dental impression materials of various consistencies, comprising a chamber section [8] having a discharge opening at the front end of the chamber section and having a closing part [1] situated at the rear end of the chamber section having a base plate, with inlet openings, two or more of the orifices of para 0027, for individual components to be introduced, and a central opening for a mixer shaft [5] which is rotatable about its longitudinal axis in the chamber section [8], having a third orifice, a third one of the orifices of para 0027, which may be used as a ventilation opening if

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desired, and which may have a cross-sectional area much smaller than an inlet opening (two orifices of the possible three being shown in figure 2); and further teach that the ventilation opening (such as 3) may be axially provided in the shape of a slit in the base plate at the entry to the mixer (figure 3). It would have been obvious to have made the opening which may be used as a ventilation opening of Pauser in the shape of a slit, as do Wagner: the motivation would have been to provide the opening with a surface area larger than would be possible in a circular shape (Wagner paras 0015, 0025-0028).

49. The additional elements of claim 13, including that the openings used as inlets may be radially provided in the shape of a slit at the end of the mixer where the buffer chamber of Pauser has its exterior, are disclosed by Wagner (figure 3, paras 0015, 0025-0028).

Conclusion

50. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Janca whose telephone number is (571) 270-5550. The examiner can normally be reached on M-Th 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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AJJ

/DAVID L. SORKIN/
Primary Examiner, Art Unit 1774